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Acid-base sites on the surface of electrochemically synthesized aluminum oxides

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Abstract

Acidic and basic properties of the surface of aluminum oxides, whose precursors are electrochemically synthesized aluminum hydroxides, were studied by IR spectroscopy. Carbon monoxide, ammonia, and deuterochloroform were used as probes in the studies of acid-base sites. The effect of conditions (pH and T) for the preparation of aluminum hydroxide on the formation of acid and base sites of the surface was shown. Acidic and basic properties of aluminum oxide obtained by different methods were compared.